

# PS-LX910

## SERVICE MANUAL

*AEP Model*  
*UK Model*  
*E Model*



### SPECIFICATIONS

#### Turntable

Platter	30 cm (12 in.), aluminum-alloy diecast
Motor	BSL (brushless and slotless) motor
Drive system	Direct drive
Control system	Quartz lock servo control system
Speed	33 $\frac{1}{3}$ rpm, 45 rpm
Wow and flutter	0.03% (WRMS)* <sup>1</sup>
	$\pm 0.035\%$ (WRMS), $\pm 0.045\%$ (DIN)
Signal-to-noise ratio	75 dB (DIN-B)
Automatic system	Lead-in, return, reject, repeat, arm up/down, record size selection

#### Tonearm

Type	Linear tracking tonearm
Pivot-to-stylus length	75 mm (3 in.)
Tracking error	$\pm 0.1^\circ$
Usable cartridge	Plug-in type, 6 g

#### Cartridge (XL-300G)

Type	Moving magnet type
Frequency response	20 Hz to 20 kHz
Channel separation	23 dB at 1 kHz
Output voltage	3.0 mV at 1 kHz, 5 cm/sec., 45°
Load impedance	50 to 100 kilohms
Tracking force	1~1.5 g
Stylus	Sony ND-300G
Weight	6 g

#### General

##### Power requirements

AEP model: 220 V ac, 50/60 Hz (240 V ac adjustable by authorized Sony personnel)  
UK model: 240 V ac, 50/60 Hz (220 V ac adjustable by authorized Sony personnel)  
E model: 110 – 120V or 220 – 240V ac adjustable, 50/60 Hz

##### Power consumption

10 W

##### Dimensions

Approx. 355 × 90 × 360 mm (w/h/d)  
(14 × 3 $\frac{1}{2}$  × 14 $\frac{1}{4}$  in.)


including projecting parts and controls

##### Weight

Approx. 4.5 kg (9 lb 15 oz), net  
Approx. 6.1 kg (13 lb 7 oz), in shipping carton

\*<sup>1</sup> This new measuring method concerns only the turntable assembly, including the platter. It excludes wow and flutter caused by the tonearm, the cartridge, or the record. Measured by obtaining signal from magnetic pick-up head.

#### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.



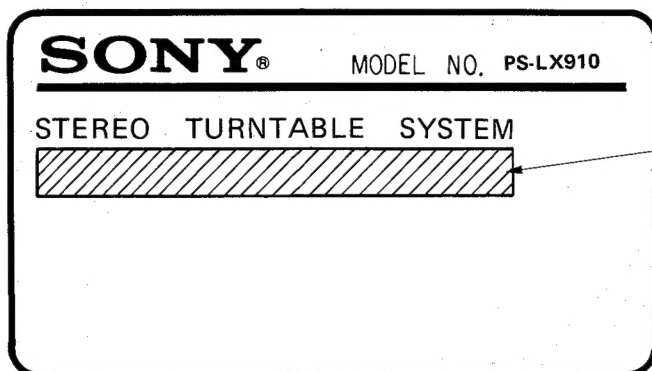
STEREO TURNTABLE SYSTEM  
**SONY**®

**AUD**

# PS-LX910

## MODEL IDENTIFICATION

— Specification Label —



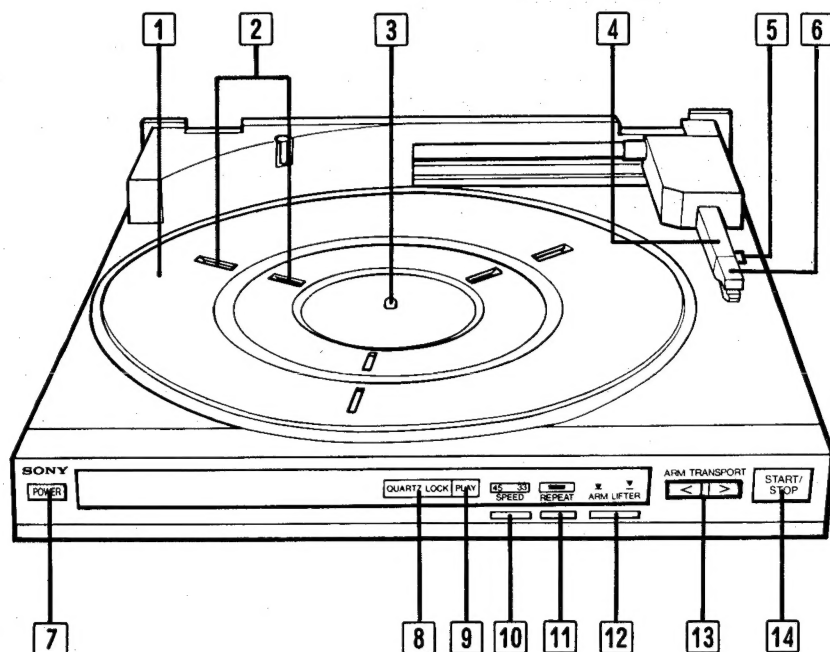
AEP : AC: 220 V ~ 50/60 Hz 10W

UK : 240 V ~ 50/60 Hz 10 W

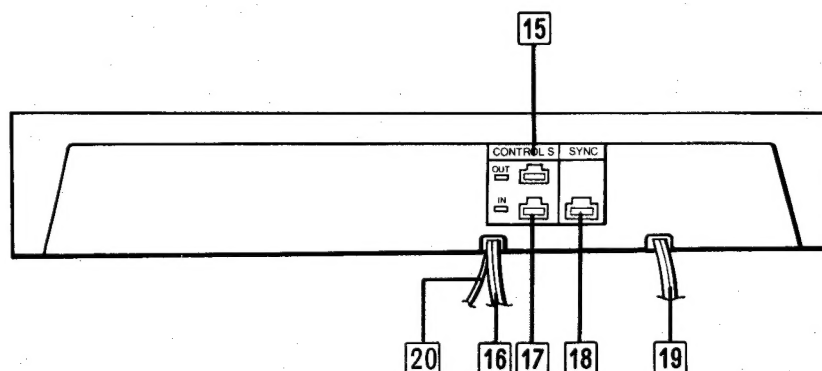
E : AC: 110 - 120V, 220 - 240 V ~ 50/60 Hz 10 W

## LOCATION AND FUNCTION OF CONTROLS

Front panel



Rear panel



Each number is keyed to the descriptive text in "FUNCTION OF CONTROLS".

Each number in the text is keyed to that of the illustration on page 2.

**FRONT PANEL**

- 1 Rubber mat**
- 2 Auto-record-size selection holes and lamp**  
See "AUTO-RECORD-SIZE SELECTION SYSTEM" on page 9.
- 3 Center spindle**
- 4 Tonearm**
- 5 Cartridge locking screw**
- 6 Cartridge**
- 7 POWER switch**
- 8 QUARTZ LOCK indicator**  
The indicator illuminates when the turntable rotation is locked to the nominal speed by the quartz lock control system. The indicator goes out when the turntable rotation is out of the nominal speed.
- 9 START indicator**  
The indicator lights up when play starts.
- 10 SPEED selector and indicators**  
Selects the speed of the record. When the POWER switch is turned on, the speed is always 33-1/3 rpm and the indicator on the right illuminates. Press this button to play a 45 rpm record. The indicator on the left lights up.
- 11 REPEAT button and indicator**  
Press this button to repeat play.  
The indicator lights up. To cancel the repeat play, press it again.
- 12 ARM LIFTER button**  
Press this button to lift and lower the tonearm.  
When the tonearm is on the arm rest position, it cannot be lifted up with this button.
- 13 ARM TRANSPORT button**  
Press this button to move the tonearm inwards or outwards.
- 14 START/STOP button**  
Press this button to start the record playing. To stop during play, press it again.

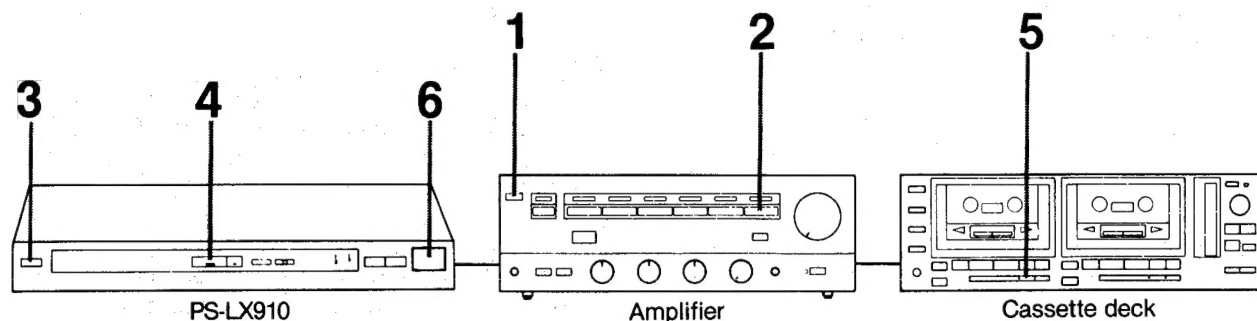
**REAR PANEL**

- 15 CONTROL S OUT connector (4-pin)**  
Connect to the CONTROL S IN or **R** REMOTE IN connector of other Sony audio equipment for remote control of the total audio system.
- 16 Phono cord**
- 17 CONTROL S IN connector (4-pin)**  
Connect to the CONTROL S OUT or **R** REMOTE OUT connector of other Sony audio equipments with the supplied flat 4-pin remote control cord for remote control of the total audio system.
- 18 SYNC connector (3-pin)**  
Connect to synchro connector of the Sony cassette deck for synchronized recording with the supplied synchro connecting cord (3-pin).
- 19 Power cord**
- 20 Grounding cord**

## SYNCHRONIZED PLAY OF THE TURNTABLE AND A CASSETTE DECK

This function is convenient for making original music tape by changing the order of music in a record or by selecting your favorite music from several records.

Cassette decks which can be used with your turntable system for this special synchronized operation are those Sony models which are equipped with a 3-pin synchro remote control connector.



- 1** Press the POWER switch of the amplifier.
- 2** Set the input selector of the amplifier to PHONO.
- 3** Press the POWER switch of the turntable system.
- 4** Set the SPEED selector according to the record to be played and place the record on the platter.
- 5** Adjust the recording level of the tape deck and set it in the record stand-by mode.
- 6** To record music from the beginning of a record, press the START/STOP button.  
To record music in the middle of a record, move the tonearm on the desired music, and press the START/STOP button.

When the tonearm comes down on a record, the recording pause mode of the deck is released and the recording starts.

### To stop recording

Press the START/STOP button.

### To lift up the tonearm to move to a different point on a record

Press the ARM TRANSPORT button.

### Notes

- When the PS-LX910 is not in use, be sure to set the POWER switch to OFF (□).
- To carry out synchronized recording, be sure to connect both the synchro remote control cord and audio cord. If not, synchro operation is not possible.
- When synchronized recording is not required, be sure to disconnect the synchro remote control cord.

**FIG. 1**  
BLOCK DIAGRAM

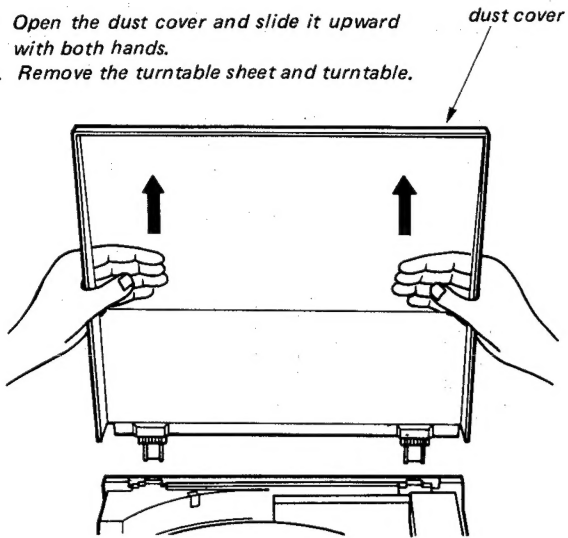
## SECTION 2 DISASSEMBLY

### 2-1. REMOVAL

Note: Follow the disassembly procedure in the numerical order given.

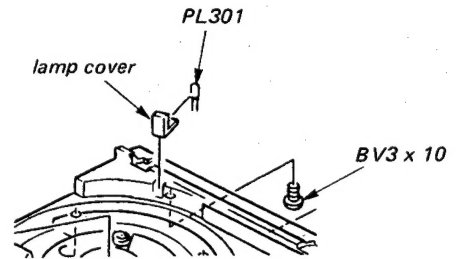
#### DUST COVER/TURNTABLE

1. Open the dust cover and slide it upward with both hands.
2. Remove the turntable sheet and turntable.



#### PILOT LAMP (PL301) ASSEMBLING

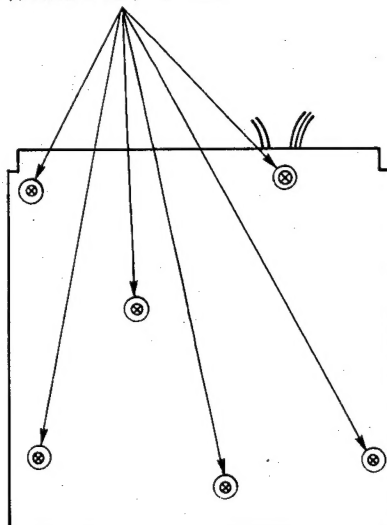
Pilot lamp (PL301) should be installed with its filament plane faced in parallel with the front face of the lamp cover.



TO PAGE 9.

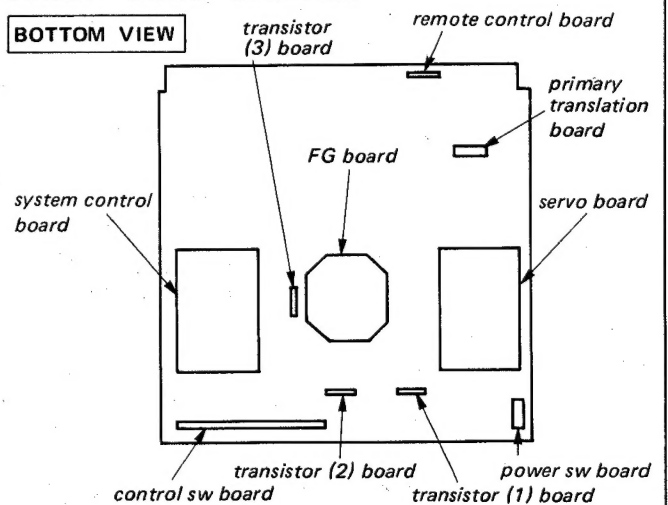
#### BOTTOM PLATE

PTPWH3 x 12 (≧6 PCS)

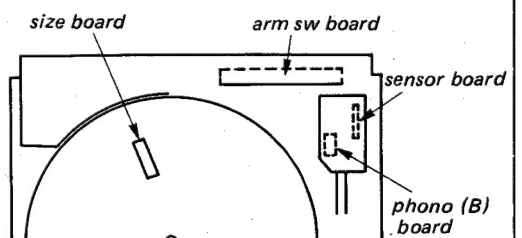


#### CIRCUIT BOARD LOCATION

##### BOTTOM VIEW



##### TOP VIEW



TO PAGE 9.

**CONTROL SW BOARD/POWER SWITCH**

This diagram illustrates the assembly of the control switch board and power switch. The components and their fasteners are labeled as follows:

- control sw board**: The main control switch assembly.
- control panel**: The front-facing panel of the unit.
- power switch/power sw board**: The power switch assembly.
- frame**: The structural frame of the unit.
- BTP3 x 8**: A screw used to secure the control switch board to the frame.
- PTPWH3 x 12**: A screw used to secure the power switch assembly to the control panel.



**TONEARM DRIVE MOTOR (M301)**

mark

white

tonearm drive motor (M301)

red

acoustic absorber case

hole

motor pulley

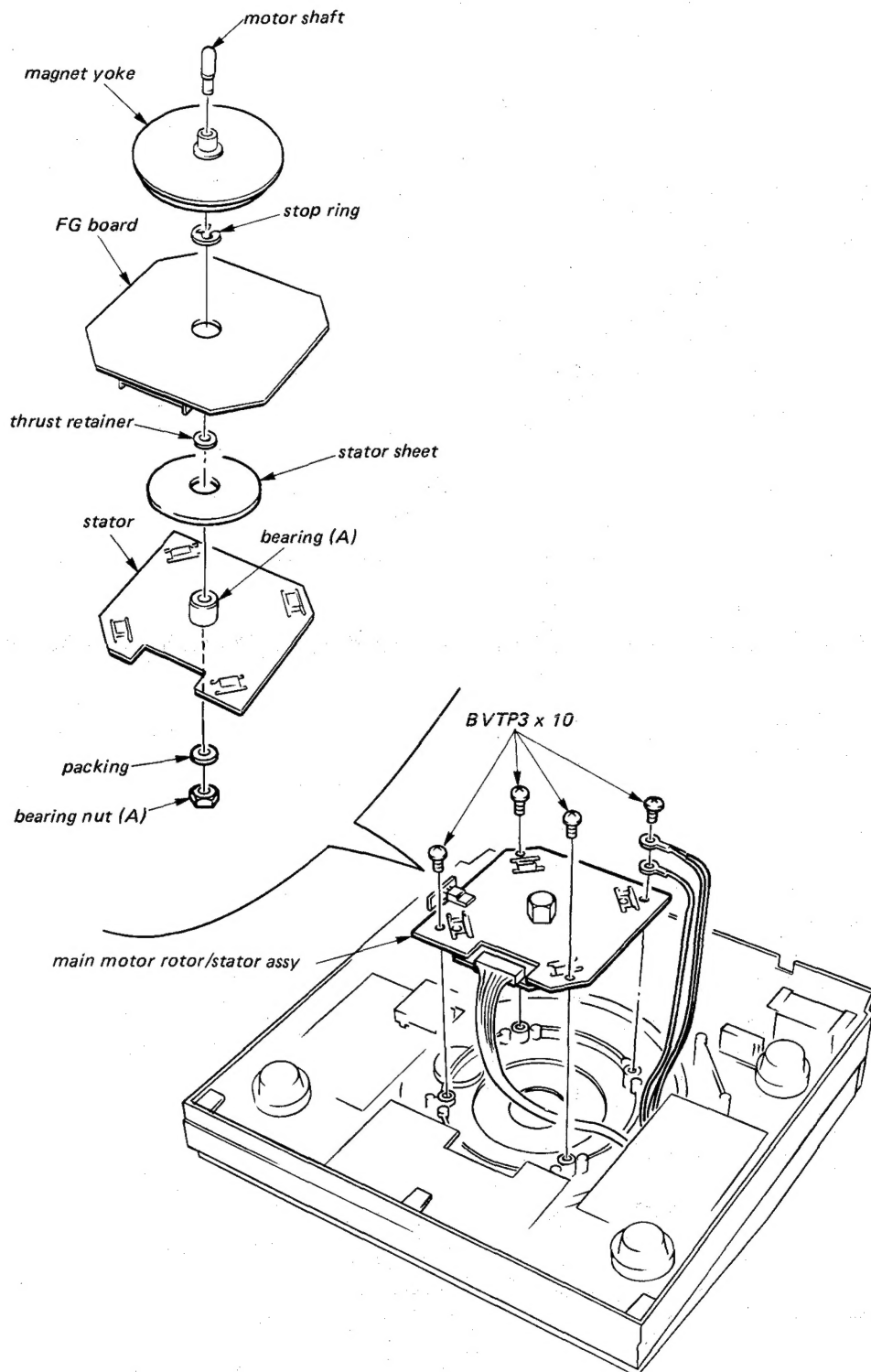
$1.8 \pm 0.2\text{mm}$   
(3/32")

motor cushion

① driving belt

② motor screw

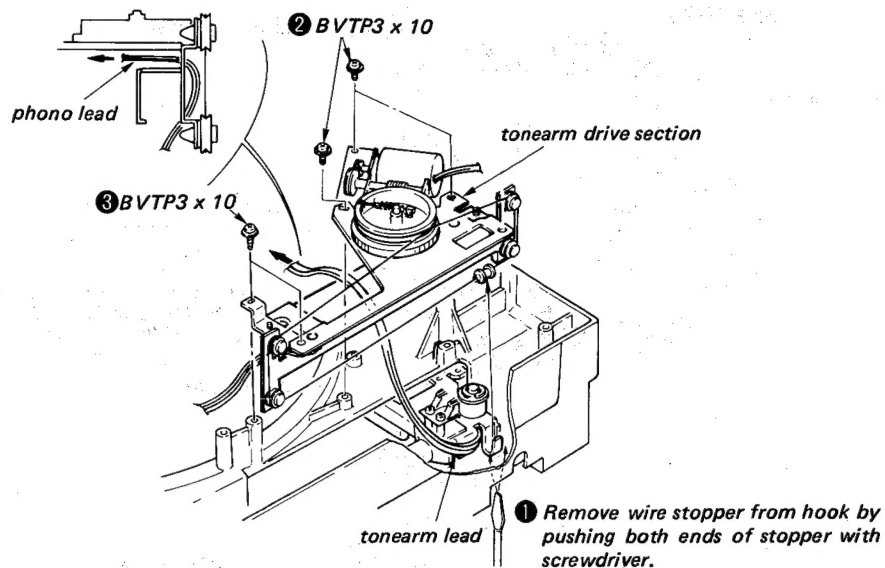
**MOTOR ROTOR/MOTOR STATOR**





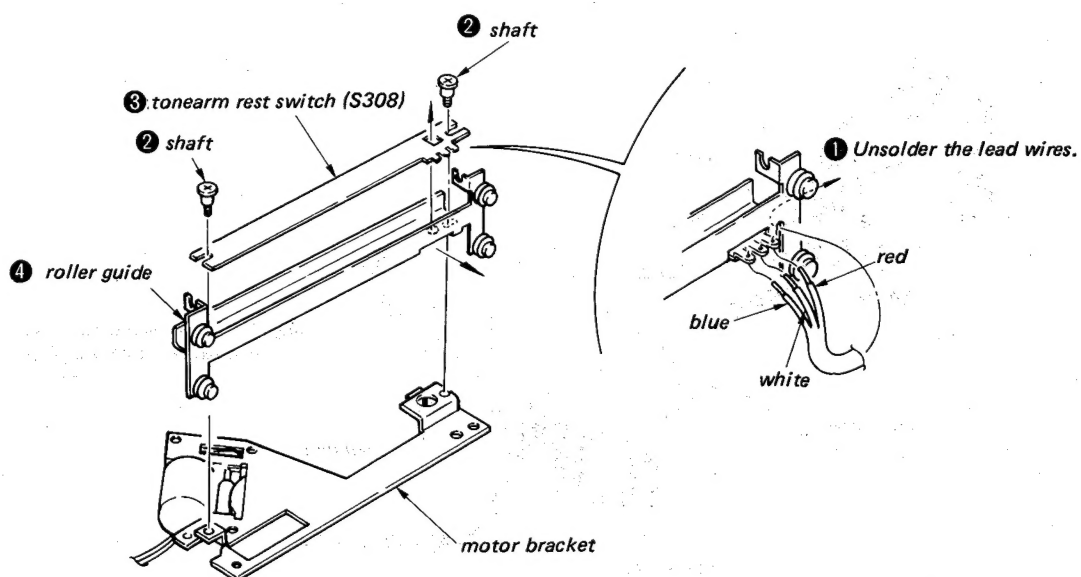
FROM PAGE 6

# TONEARM DRIVE SECTION

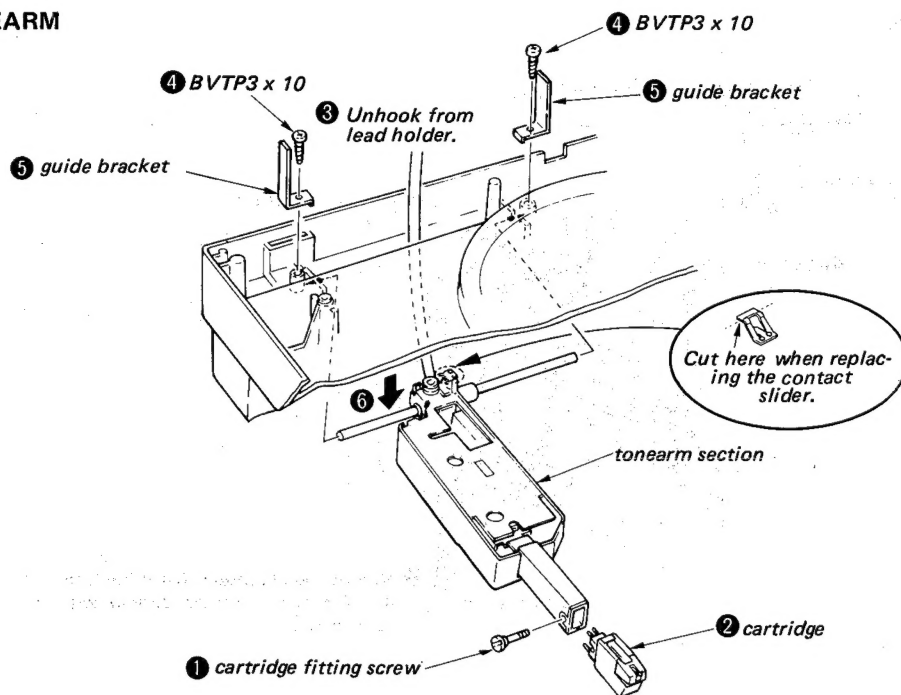


TONEARM DRIVE  
CORD STRINGING  
(See page 13)

# TONEARM REST SWITCH (S308)/ROLLER GUIDE

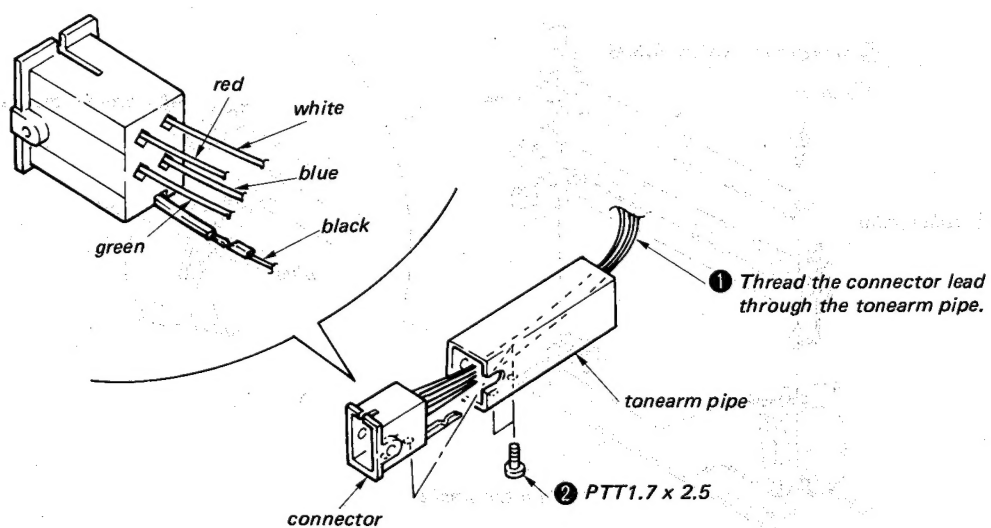


## TONEARM

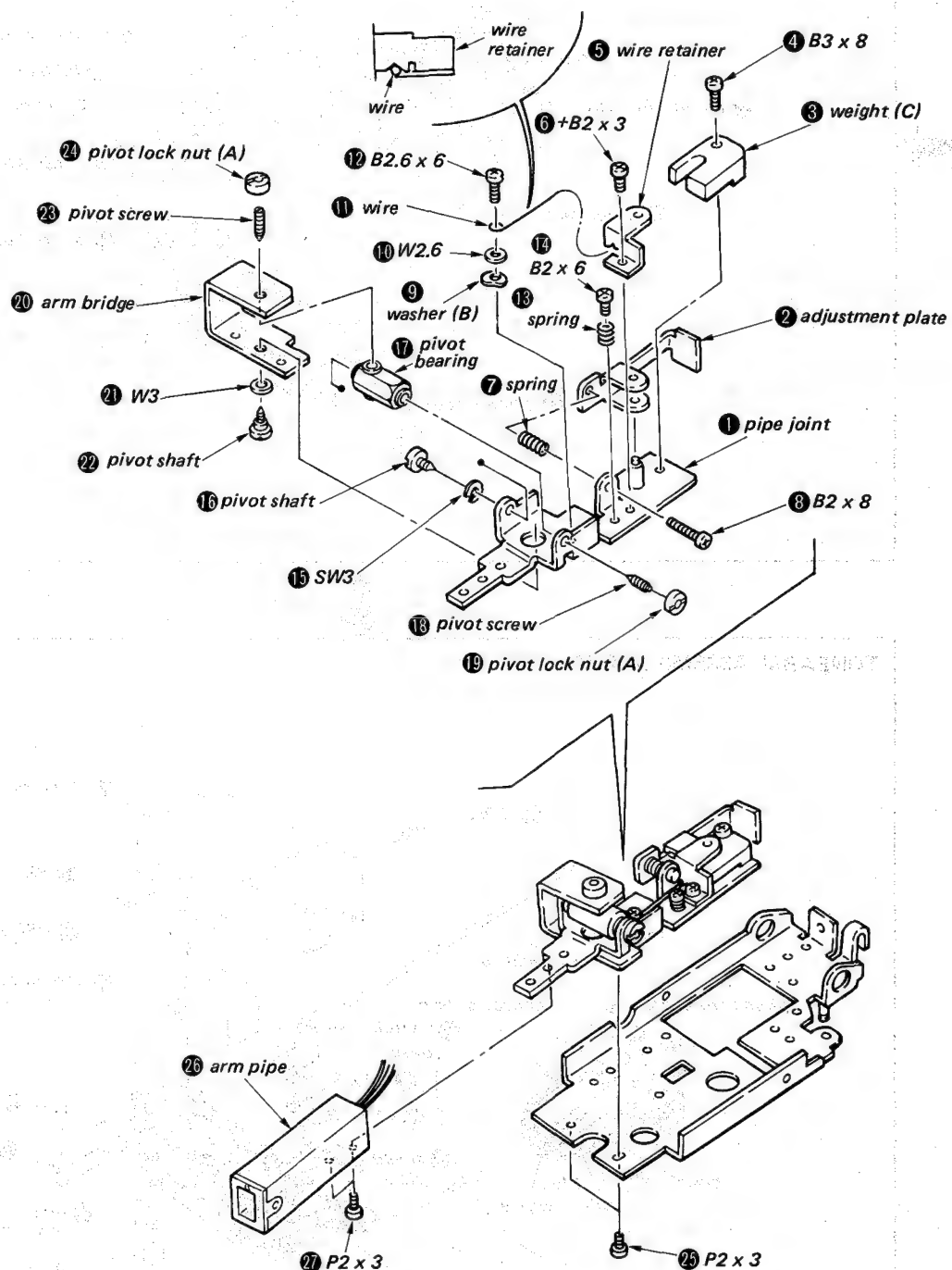


## 2-2. TONEARM ASSEMBLING

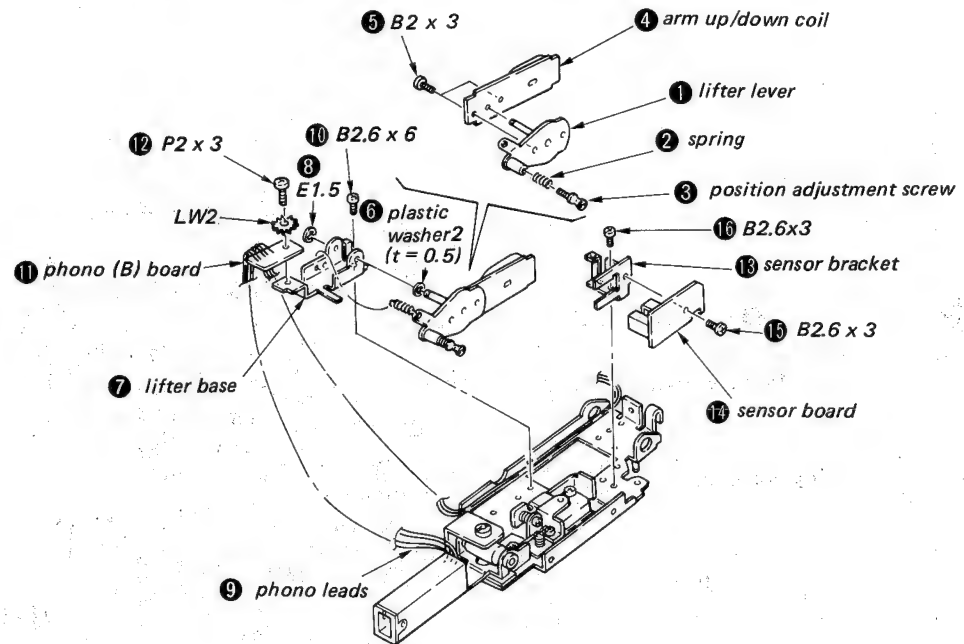
### TONEARM ASSEMBLING (1)



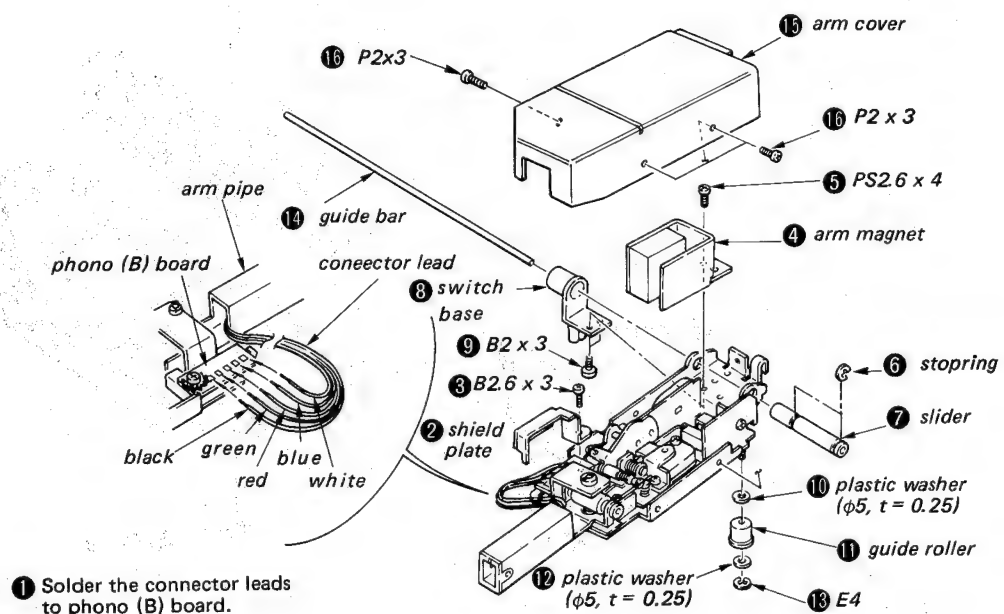
## TONEARM ASSEMBLING (2)



TONEARM ASSEMBLING (3)



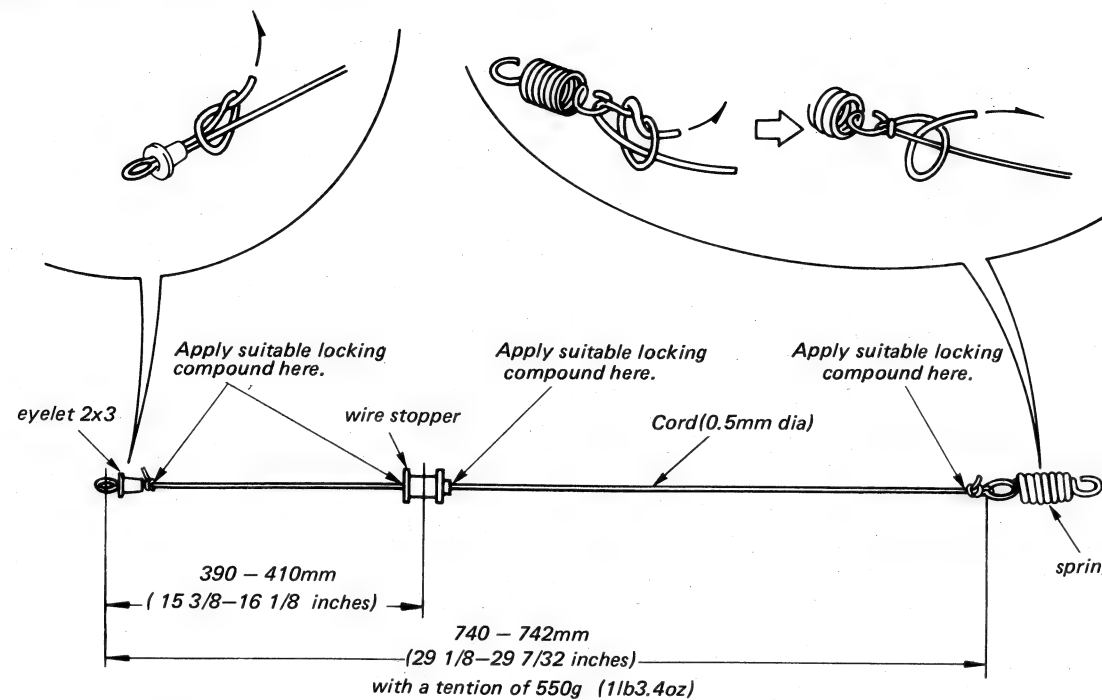
TONEARM ASSEMBLING (4)



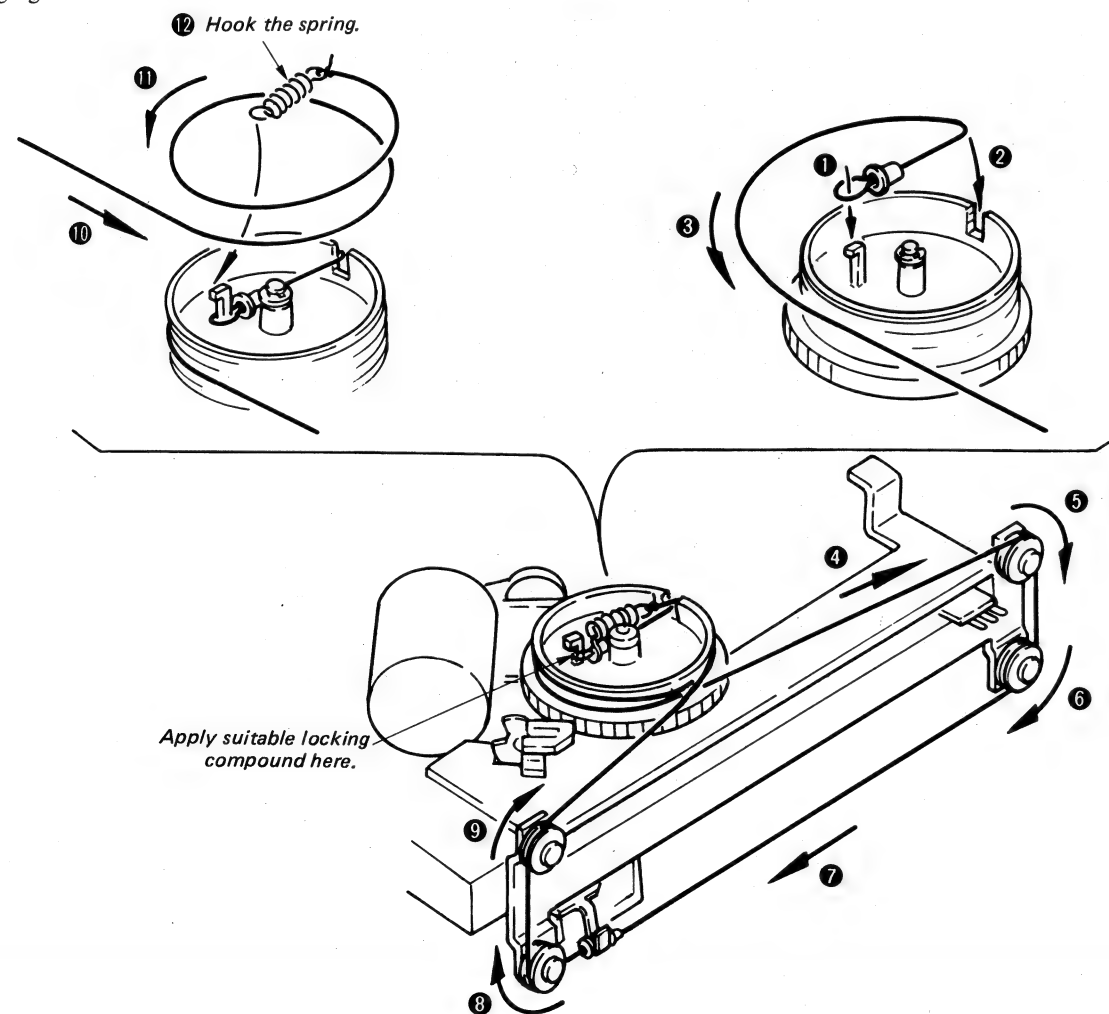
# SECTION 3 ADJUSTMENTS

## 2-2. TONEARM DRIVE CORD STRINGING

### (1) Preparation



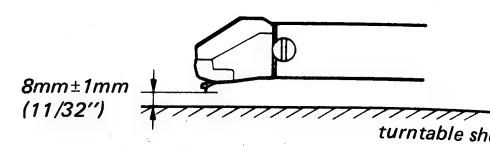
### (2) Stringing



## 3-1. MECHANICAL ADJUSTMENTS

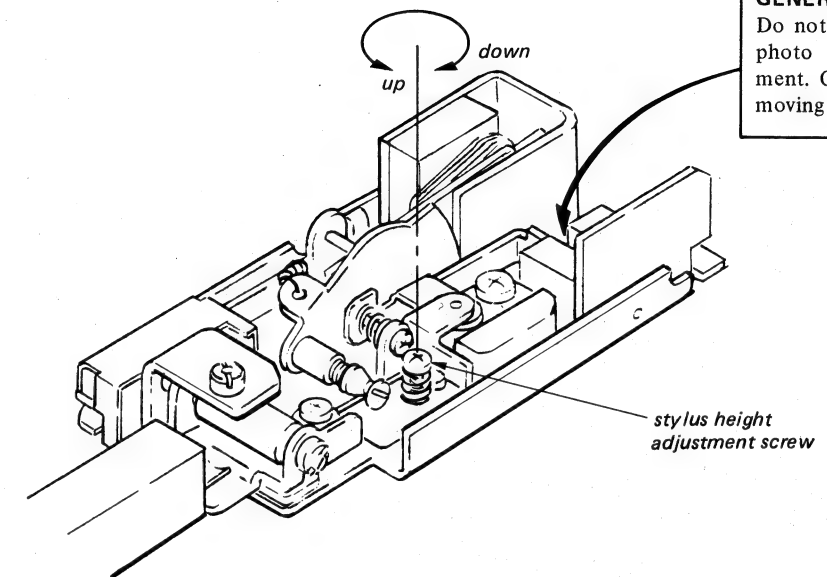
### Stylus Height Adjustment

1. Place the turntable sheet on the turntable.
2. Push the ARM TRANSPORT (<) button and move the tonearm to inside-groove position.
3. Adjust the stylus-height adjustment screw so that the stylus height becomes in  $8\text{mm} \pm 1\text{mm}$  ( $11/32''$ ) in this condition.



### GENERAL NOTE:

Do not let a strong light get in the photo interrupter during mechanical adjustment. Otherwise, misoperation of stopping may occur to the tonearm base.

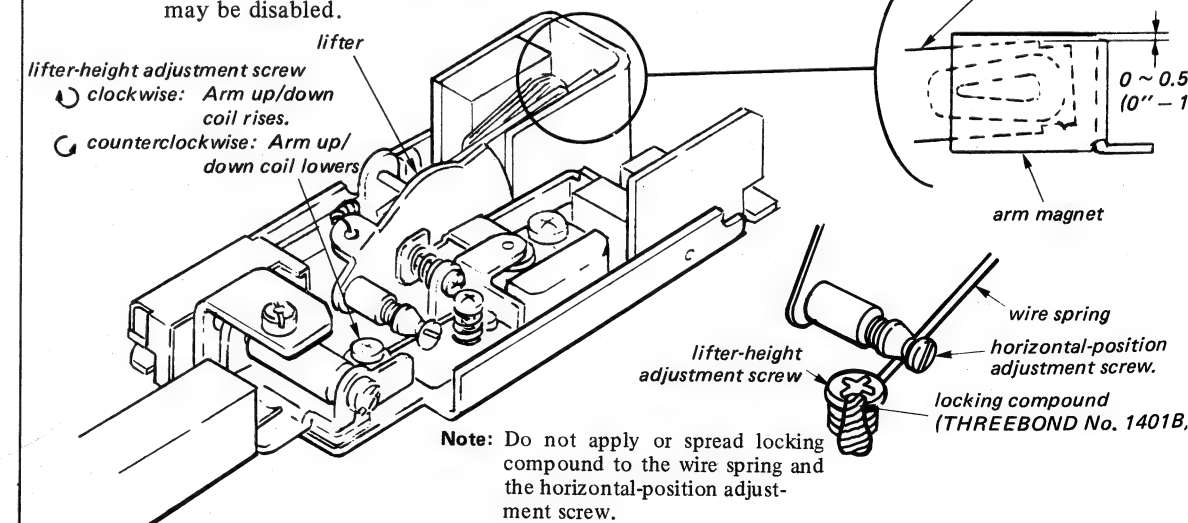


### Lifter-Height Adjustment

**NOTE:** Perform this adjustment after the Stylus-Height Adjustment and before the Tracking-Error Adjustment.

1. Adjust the lifter-height adjustment screw so that the arm up/down coil edge places in the position as shown.

Note: Finish the adjustment in the screwing-in, i.e., clockwise direction.  
Do not screw in too much. The wire spring may be disabled.

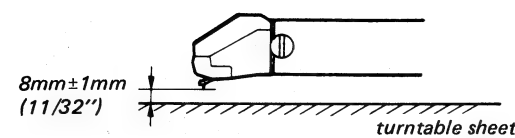


## SECTION 3 ADJUSTMENTS

### AL ADJUSTMENTS

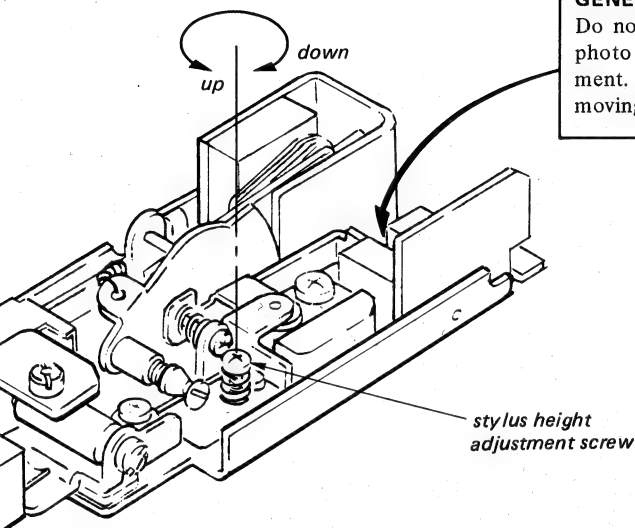
#### Adjustment

Turntable sheet on the turntable.  
ARM TRANSPORT (<) button and  
tonearm to inside-groove position.  
stylus-height adjustment screw so that  
stylus height becomes in  $8\text{mm} \pm 1\text{mm}$  ( $11/32''$ )  
position.



#### GENERAL NOTE:

Do not let a strong light get in the groove of  
photo interruptor during mechanical adjust-  
ment. Otherwise, misoperation of stoppage or  
moving may occur to the tonearm base.



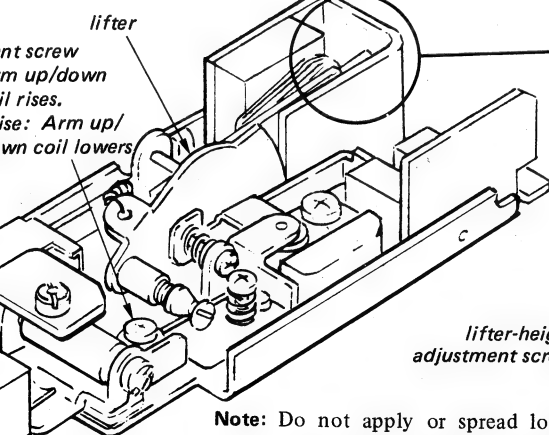
stylus height  
adjustment screw

#### Adjustment

Perform this adjustment after the Stylus-  
Height Adjustment and before the Tracking-  
Error Adjustment.

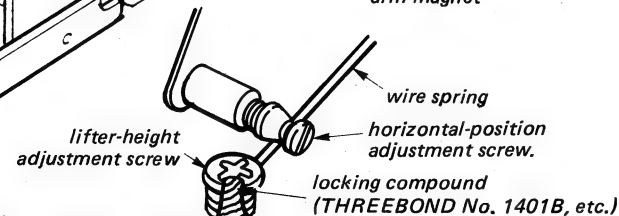
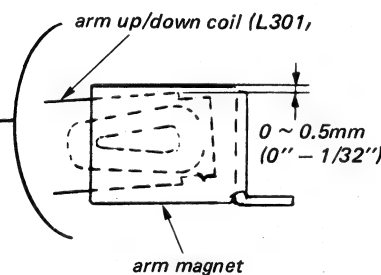
Adjust the lifter-height adjustment screw so that  
the lifter coil edge places in the position

Perform the adjustment in the screwing-in,  
clockwise direction.  
Do not screw in too much. The wire spring  
will be disabled.



**Note:** Do not apply or spread locking  
compound to the wire spring and  
the horizontal-position adjust-  
ment screw.

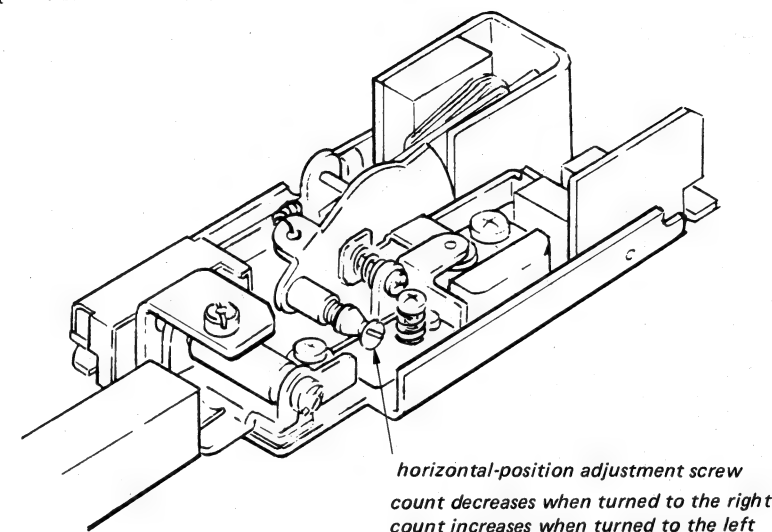
- Unscrew the adjustment screw in  $1/8$  turns.  
This unscrewing is to remove deforms in the wire  
spring made in step 1. Do not unscrew too much.
- After the adjustment, apply suitable locking com-  
pound to the position of the adjustment screw.



#### Drop Point (30 cm) Adjustment

**NOTE:** Perform this adjustment after the Lifter-  
Height Adjustment and before the Tracking-  
Error Adjustment.

- Put the Test Record (YFSC-16) on the turntable  
sheet.
- Push the START/STOP button.
- Adjust the horizontal-position adjustment screw  
so that the drop point is made in 9 to 13 counts.



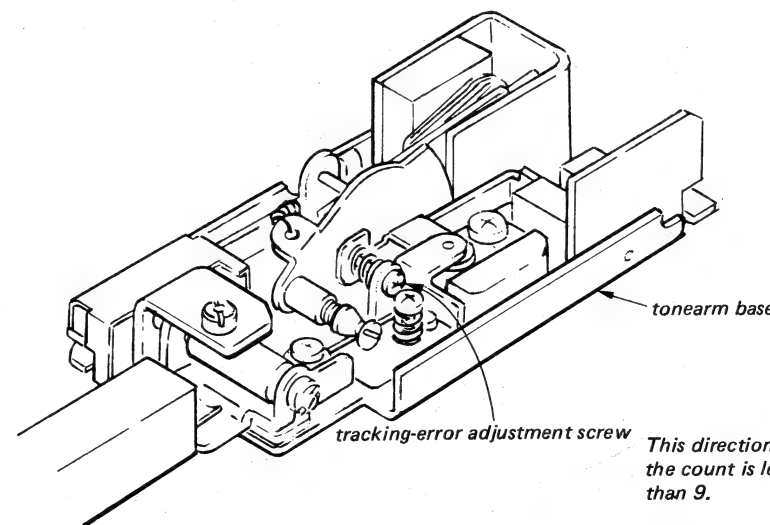
horizontal-position adjustment screw  
count decreases when turned to the right  
count increases when turned to the left

#### Tracking Error Adjustment

**Note:** Perform this adjustment after the Drop-Point  
(30 cm) Adjustment.

- Place a test record (YFSC-16) on the turntable  
and press the START/STOP button for lead-in.
- Adjust with the adjustment screw so that the  
tonearm base does not move just after the tone-  
arm goes down.

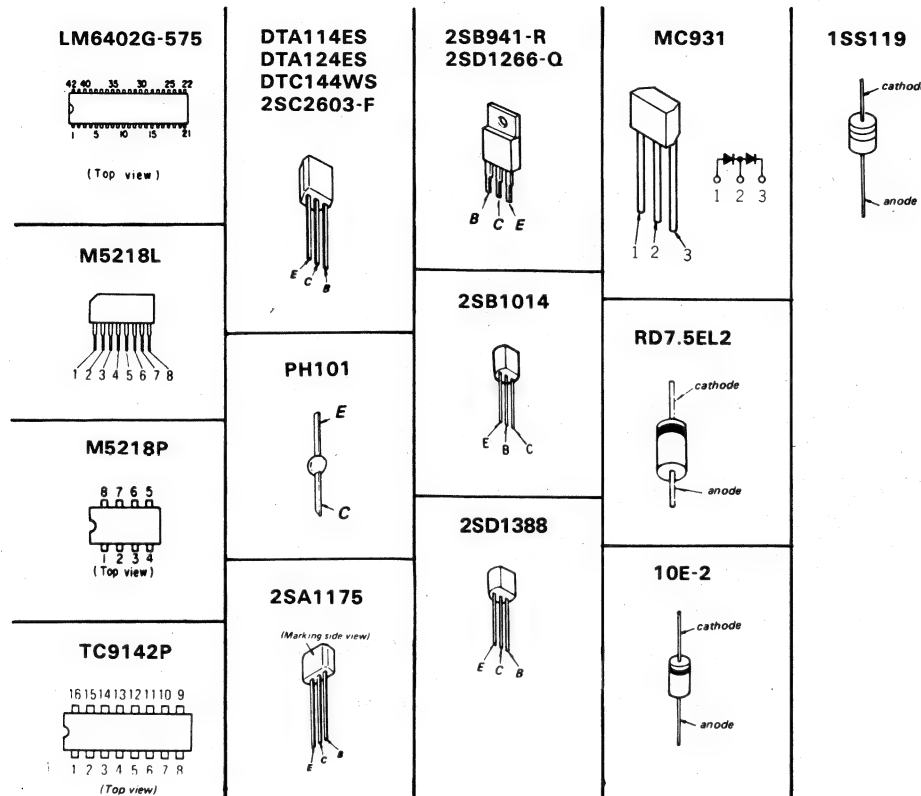
- Press START/STOP button for stop. Press  
START/STOP button to let the tonearm lead  
in, and then go UP (▲ button) after the tonearm  
base moves.
- Check the count at this time, and then check  
that the difference in count when the tonearm  
goes down again is within 5 counts.



tracking-error adjustment screw  
This direction when  
the count is less  
than 9.

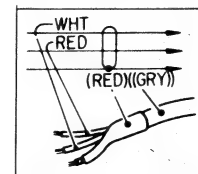
This direction when  
the tonearm twists to  
the left in step 4.

• Semiconductor Lead Layouts



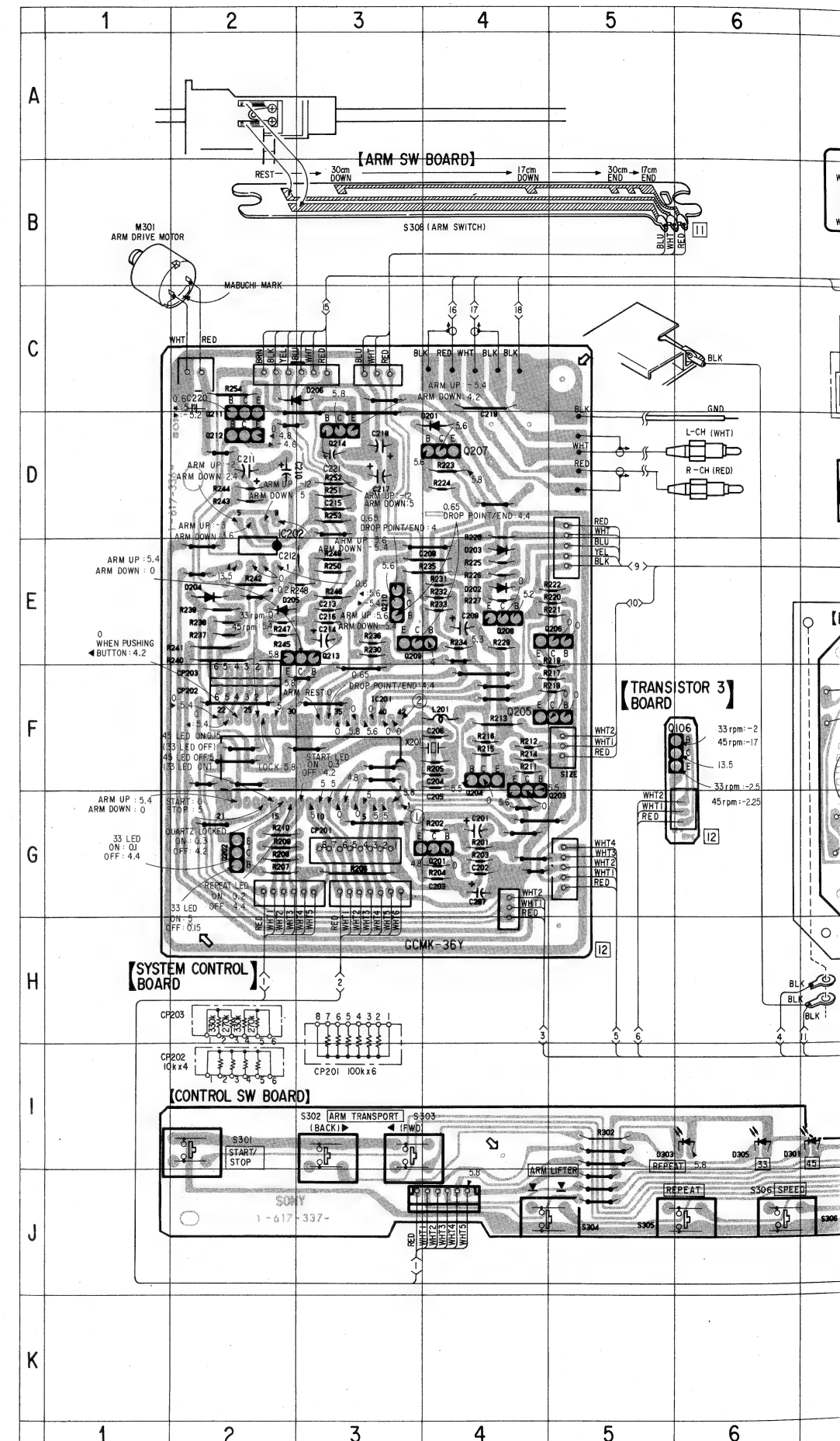
Ref. No.	Location	Ref. No.	Location
D101	E-13	Q106	F-6
D102	E-12	Q107	F-12
D103	E-13	Q108	G-12
D104	E-12	Q109	F-12
D105	E-14	Q110	G-12
D106	E-14	Q111	F-12
D107	G-14	Q112	G-12
D108	G-14	Q113	F-12
D201	D-4	Q114	G-12
D202	E-4	Q115	F-12
D203	E-4	Q116	G-12
D204	E-2	Q117	F-12
D205	E-2	Q118	F-12
D206	C-3	Q119	H-12
D301	I-7	Q201	G-4
D302	I-7	Q202	G-2
D303	I-6	Q203	F-4
D304	I-8	Q204	F-4
D305	I-6	Q205	F-5
IC101	G-13	Q206	E-5
IC102	F-13	Q207	D-4
IC201	F-3	Q208	E-4
IC202	E-2	Q209	E-3
PH101	C-7	Q210	E-3
Q101	I-12	Q211	D-2
Q102	E-13	Q212	D-2
Q103	I-10	Q213	E-3
Q104	D-14	Q214	D-3
Q105	G-14	Q301	C-10
		Q302	E-10

- Color code of sleeving over the end of the jacket.



- : parts extracted from the component side.
- : parts extracted from the conductor side.

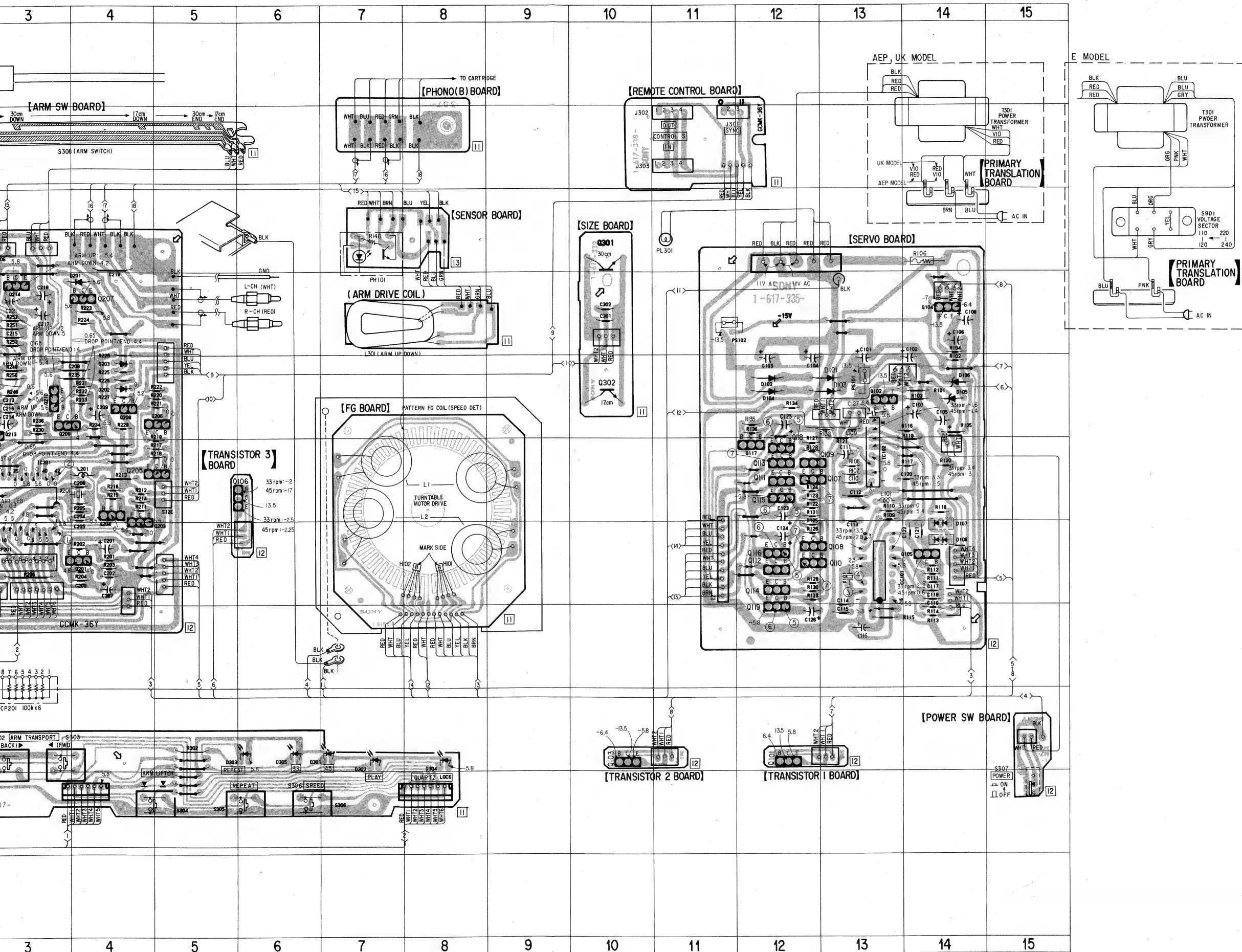
4-1. MOUNTING DIAGRAM  
— Conductor Side —





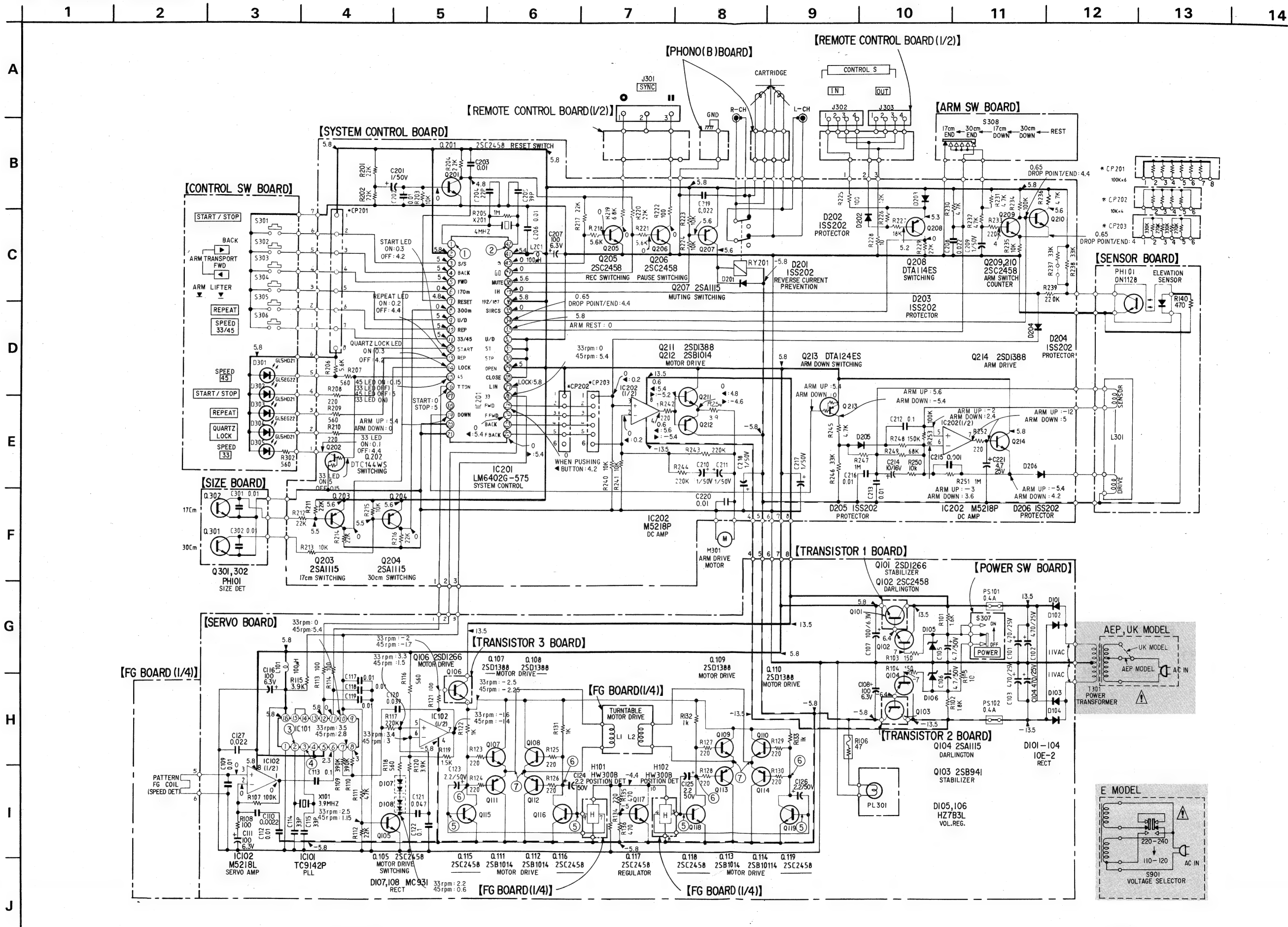
SECTION 4  
DIAGRAMS

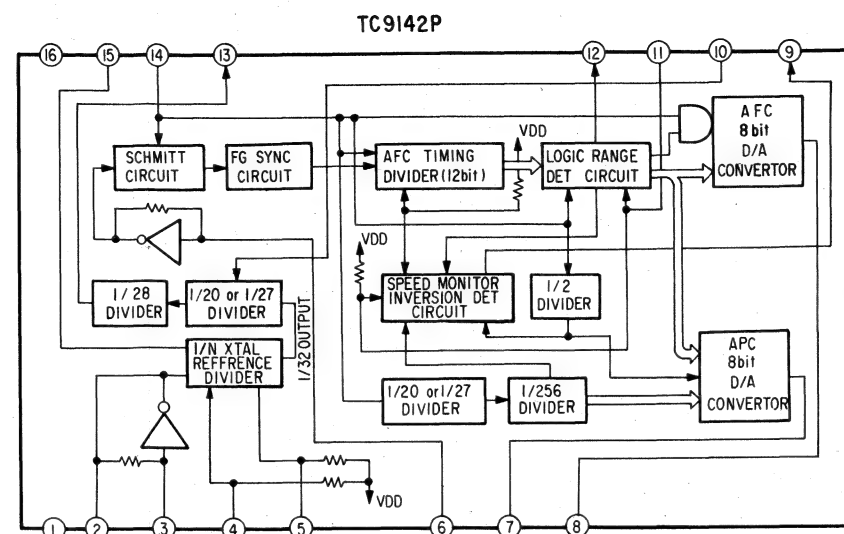
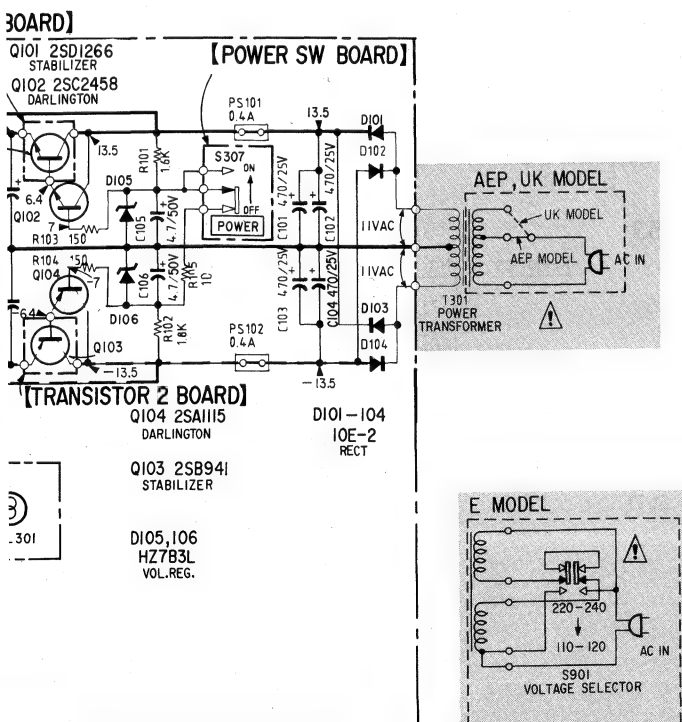
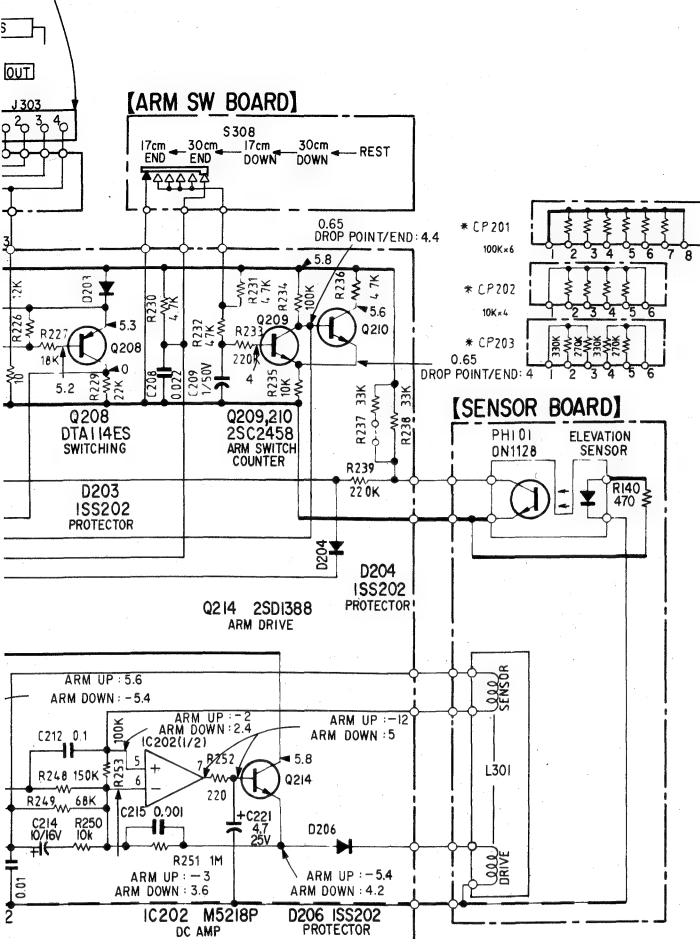
PS-LX910 PS-LX910






#### 4-2. SCHEMATIC DIAGRAM









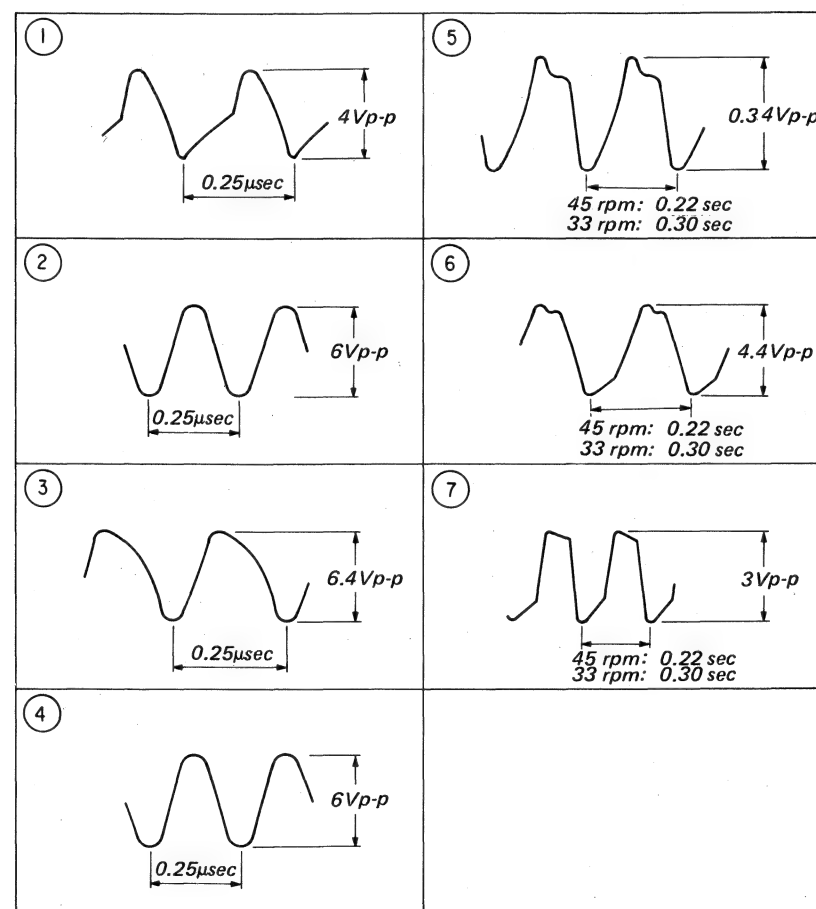
**Note:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.

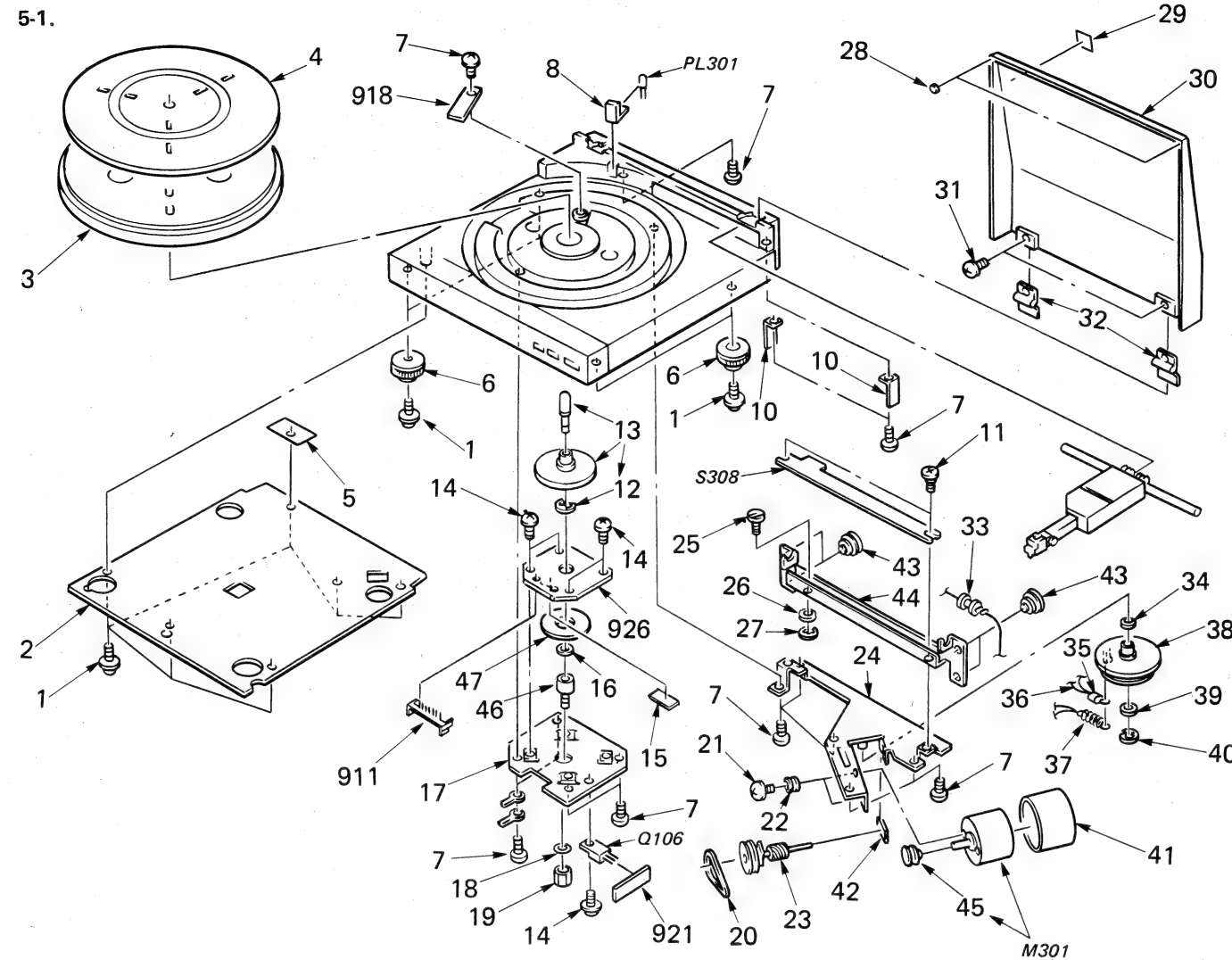
**Note:** The components identified by shading and mark  are critical for safety. Replace only with part number specified.

-  : fusible resistor.
-  : B+ bus.
-  : B- bus.

- Voltages and waveforms are taken from these points to ground with the ARM LIFTER  button pushed and without dropping the stylus to the record, and with the turntable turning.
- Voltages: DC 50 kΩ/V VOM is used.
- Waveforms: Oscilloscope is used.
- No mark: 33 rpm



# SECTION 5 EXPLODED VIEW AND PARTS LIST



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	3-703-136-00	SCREW, TAPPING		29	3-703-705-41	STICKER, SONY SYMBOL (30)	
2	4-912-016-11	BOARD, BOTTOM		30	X-4908-105-3	COVER ASSY, DUST	
3	4-883-720-00	TURNTABLE		31	3-703-249-11	SCREW, S TIGHT, +PTWH 3X6	
4	4-883-723-01	SHEET, TURNTABLE		32	4-908-107-01	HINGE	
5	9-911-863-XX	RETAINER, CORD		33	4-885-744-00	STOPPER, WIRE	
6	X-4903-301-1	INSULATOR ASSY		34	3-701-441-21	WASHER	
7	7-685-647-71	SCREW +BVTP 3X10 TYPE2 SLIT		35	7-623-616-01	EYELET, 2X3	
8	4-908-110-01	COVER, LAMP		36	7-633-120-45	STRING, TETRON DIAL (0.5MM)	
10	*4-912-009-01	RETAINER, GUIDE BAR		37	4-885-767-00	SPRING, TENSION	
11	*3-465-048-00	SHAFT		38	4-885-749-00	WHEEL, WORM	
12	7-624-133-24	STOP RING 7, TYPE-CE		39	3-701-441-01	WASHER	
13	A-4608-318-A	ROTOR ASSY		40	7-624-106-04	STOP RING 3.0, TYPE -E	
14	7-685-871-01	SCREW +BVTT 3X6 (S)		41	*4-882-233-00	CASE, ACOUSTIC ABSORBER	
15	3-831-441-XX	CUSHION (25X15X0.3)		42	4-885-703-00	GUIDE, WORM SHAFT	
16	*4-905-897-01	RETAINER, THRUST		43	X-4908-103-1	PULLEY ASSY	
17	*4-887-472-01	STATOR		44	*4-908-127-01	PLATE, GUIDE, ROLLER	
18	4-885-728-00	PACKING		45	4-885-704-03	PULLEY, MOTOR	
19	*4-912-011-01	NUT (A), BEARING		46	*4-912-012-01	BEARING (A)	
20	4-913-325-01	BELT (ARM DRIVING P25), DRIVING		47	*4-913-314-01	SHEET, STATOR	
21	3-570-027-00	SCREW, MOTOR		911	*1-564-527-11	PLUG, CONNECTOR 12P	
22	3-570-118-00	CUSHION, MOTOR		918	*1-617-339-13	PC BOARD, SIZE	
23	X-4885-710-0	WORM ASSY		921	*1-617-342-11	PC BOARD, TRANSISTOR 3	
24	*X-4908-104-1	BRACKET (A) ASSY, MOTOR		926	A-4644-247-A	PC BOARD ASSY	
25	4-885-748-00	PIN, ADJUSTMENT		M301	A-4608-291-A	MOTOR ASSY	
26	4-885-747-00	WASHER (H)		PL301	1-518-169-XX	LAMP, PILOT	
27	7-624-190-81	STOP RING 2, TYPE-CS		S308	1-554-817-11	SWITCH	
28	4-885-183-00	CUSHION (D)					

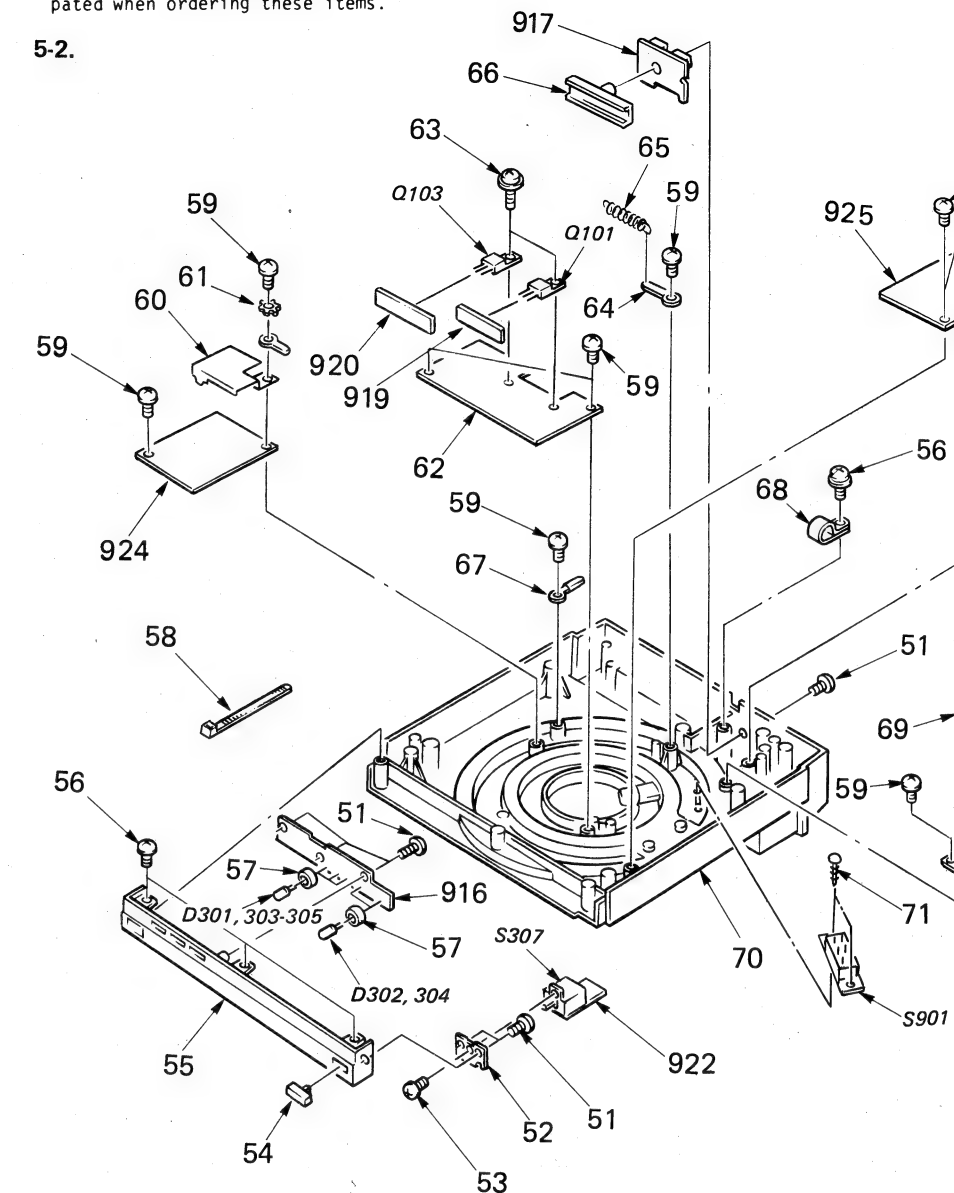
## NOTE:

The mechanical parts with no reference number in the exploded views are not supplied.

Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The construction parts of an assembled part are indicated with a collation number in the remark column.

## 5-2.



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51	7-685-146-19	SCREW +BTP 3X8 TYPE2 N-S		71	3-703-131-01	(E)	
52	*4-907-926-01	BRACKET, SWITCH		72	A.1-526-565-12	(E)	
53	7-628-253-05	SCREW +PS 2X4		904	1-558-403-11	COR	
54	4-907-928-01	BUTTON, POWER					
55	X-4912-003-6	(AEP,UK,E)...PANEL ASSY, CONTROL		905	A.1-534-572-15	(E)	
56	3-703-136-00	SCREW, TAPPING			A.1-555-990-11	(AEP)	
57	*4-901-657-00	SPACER (A), LED			A.1-556-560-11	(UK)	
58	*3-701-748-00	CLAMP		913	*1-608-536-00	PC E	
59	7-685-647-71	SCREW +BVTP 3X10 TYPE2 SLIT		916	*1-617-337-11	PC E	
60	*4-912-008-01	PLATE, SHIELD		917	*1-617-338-11	PC E	
61	7-623-422-07	LW 3, TYPE B		919	*1-617-340-11	PC E	
62	*4-912-006-01	HEAT SINK		920	*1-617-341-11	PC E	
63	7-685-871-01	SCREW +BVTT 3X6 (S)					
64	3-460-077-00	CLAMP, WIRE		922	*1-617-343-11	PC E	
65	4-885-789-00	SPRING, TENSION		924	*A-4614-095-A	MOUN	
66	*4-912-013-01	HOLDER, REMOTE CONTROL		925	*A-4619-281-A	MOUN	
67	*3-701-822-00	HOLDER, WIRE					
68	*3-001-707-01	HOLDER, WIRE		S901	A.1-570-047-11	(E)	
69	*4-885-798-00	COVER, POWER		T301	A.1-447-516-51	(AEP)	
70	*4-912-019-01	FRAME		T301	A.1-447-517-71	(E)	





## SECTION 6 ELECTRICAL PARTS LIST

## NOTE:

- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

## CAPACITORS:

MF:μF, PF:μF.

## RESISTORS

- All resistors are in ohms.
- F : nonflammable

## COILS


• MMH : mH, UH : μH

## SEMICONDUCTORS




In each case, U : μ, for example:

UA....: μA..., UPA....: μPA..., UPC....: μPC,

UPD....: μPD...

The components identified by shading and mark  are critical for safety. Replace only with part number specified.

## ELECTRICAL PARTS

Ref.No.	Part No.	Description
901	*1-508-802-00	BASE POST U TYPE
902	*1-508-878-00	BASE POST 3P
903	*1-508-880-00	BASE POST, MCD CONNECTOR 6P
904	1-558-403-11	CORD (WITH PLUG)
905	 1-534-572-15	(E)....CORD, POWER
	 1-555-990-11	(AEP)....CORD, POWER
	 1-556-560-11	(UK)....CORD, POWER
906	1-556-552-00	CONNECTOR (PLUG IN TYPE)
907	*1-564-499-11	PIN, CONNECTOR 6P
908	*1-564-500-11	PIN, CONNECTOR 7P
909	*1-564-336-00	PIN, CONNECTOR 2P
910	*1-560-200-00	BASE POST, MCD CONNECTOR 2P
911	*1-564-527-11	PLUG, CONNECTOR 12P
913	*1-608-536-00	PC BOARD, PRIMARY TRANSLATION
914	*1-612-356-31	PC BOARD, SENSOR
915	*1-612-357-21	PC BOARD, PHONO (B)
916	*1-617-337-11	PC BOARD, CONTROL SW
917	*1-617-338-11	PC BOARD, REMOTE CONTROL
918	*1-617-339-13	PC BOARD, SIZE
919	*1-617-340-11	PC BOARD, TRANSISTOR 1
920	*1-617-341-11	PC BOARD, TRANSISTOR 2
921	*1-617-342-11	PC BOARD, TRANSISTOR 3
922	*1-617-343-11	PC BOARD, POWER SW
923	A-4505-110-A	(AEP,UK,E)...OVERALL ASSY, CARTRIDGE
924	*A-4614-095-A	MOUNTED PCB, SYSTEM CONTROL
925	*A-4619-281-A	MOUNTED PCB, SERVO
926	A-4644-247-A	PC BOARD ASSY
C101	1-124-480-11	ELECT 470MF 20% 25V
C102	1-124-480-11	ELECT 470MF 20% 25V
C103	1-124-480-11	ELECT 470MF 20% 25V
C104	1-124-480-11	ELECT 470MF 20% 25V
C105	1-123-619-00	ELECT 4.7MF 20% 50V
C106	1-123-619-00	ELECT 4.7MF 20% 50V
C107	1-123-661-00	ELECT 100MF 20% 6.3V
C108	1-123-661-00	ELECT 100MF 20% 6.3V
C109	1-162-306-31	CERAMIC 0.01MF 30% 16V
C110	1-162-302-31	CERAMIC 0.0022MF 30% 16V
C111	1-123-661-00	ELECT 100MF 20% 6.3V
C112	1-162-306-31	CERAMIC 0.01MF 30% 16V
C113	1-136-165-00	FILM 0.1MF 5% 50V
C114	1-162-211-31	CERAMIC 33PF 5% 50V
C115	1-162-211-31	CERAMIC 33PF 5% 50V
C116	1-123-661-00	ELECT 100MF 20% 6.3V
C117	1-162-306-31	CERAMIC 0.01MF 30% 16V
C118	1-162-306-31	CERAMIC 0.01MF 30% 16V

## ELECTRICAL PARTS

Ref.No.	Part No.	Description
C119	1-162-306-31	CERAMIC 0.01MF 30% 16V
C120	1-136-160-00	FILM 0.039MF 5% 50V
C121	1-136-161-00	FILM 0.047MF 5% 50V
C122	1-136-165-00	FILM 0.1MF 5% 50V
C123	1-123-612-00	ELECT 2.2MF 20% 50V
C124	1-123-612-00	ELECT 2.2MF 20% 50V
C125	1-123-612-00	ELECT 2.2MF 20% 50V
C126	1-123-612-00	ELECT 2.2MF 20% 50V
C127	1-162-596-00	CERAMIC 0.022MF 25V
C201	1-123-611-00	ELECT 1MF 20% 50V
C202	1-162-306-31	CERAMIC 0.01MF 30% 16V
C203	1-162-306-31	CERAMIC 0.01MF 30% 16V
C204	1-162-207-31	CERAMIC 22PF 5% 50V
C205	1-162-213-31	CERAMIC 39PF 5% 50V
C206	1-162-306-31	CERAMIC 0.01MF 30% 16V
C207	1-123-661-00	ELECT 100MF 20% 6.3V
C208	1-161-494-00	CERAMIC 0.022MF 30% 25V
C209	1-123-611-00	ELECT 1MF 20% 50V
C210	1-123-611-00	ELECT 1MF 20% 50V
C211	1-123-611-00	ELECT 1MF 20% 50V
C212	1-136-165-00	FILM 0.1MF 5% 50V
C213	1-162-306-31	CERAMIC 0.01MF 30% 16V
C214	1-123-617-00	ELECT 10MF 20% 16V
C215	1-162-294-31	CERAMIC 0.001MF 10% 50V
C216	1-162-306-31	CERAMIC 0.01MF 30% 16V
C217	1-123-611-00	ELECT 1MF 20% 50V
C218	1-123-611-00	ELECT 1MF 20% 50V
C219	1-161-494-00	CERAMIC 0.022MF 30% 25V
C220	1-162-306-31	CERAMIC 0.01MF 30% 16V
C221	1-123-616-91	ELECT 4.7MF 20% 25V
C301	1-162-306-31	CERAMIC 0.01MF 30% 16V
C302	1-162-306-31	CERAMIC 0.01MF 30% 16V
CP201	1-232-881-11	COMPOSITION CIRCUIT BLOCK
CP202	1-232-946-11	COMPOSITION CIRCUIT BLOCK
CP203	1-232-947-11	COMPOSITION CIRCUIT BLOCK
D101	8-719-200-02	DIODE 10E-2
D102	8-719-200-02	DIODE 10E-2
D103	8-719-200-02	DIODE 10E-2
D104	8-719-200-02	DIODE 10E-2
D105	8-719-101-67	DIODE RD7.5EL2
D106	8-719-101-67	DIODE RD7.5EL2
D107	8-719-000-12	DIODE MC931
D108	8-719-000-12	DIODE MC931
D201	8-719-911-19	DIODE 1SS119
D202	8-719-911-19	DIODE 1SS119

## ELECTRICAL PARTS

Ref.No.	Part No.	Description
D203	8-719-911-19	DIODE 1SS119
D204	8-719-911-19	DIODE 1SS119
D205	8-719-911-19	DIODE 1SS119
D206	8-719-911-19	DIODE 1SS119
D301	8-719-906-58	DIODE GL-5HD21
D302	8-719-907-36	DIODE GL-5EG22
D303	8-719-906-58	DIODE GL-5HD21
D304	8-719-907-36	DIODE GL-5EG22
D305	8-719-906-58	DIODE GL-5HD21
H101	8-719-920-37	ELEMENT, HALL HW-300B
H102	8-719-920-37	ELEMENT, HALL HW-300B
IC101	8-759-201-58	IC TC9142P
IC102	8-759-600-02	IC M5218L
IC201	8-759-802-00	IC LM6402G-575
IC202	8-759-601-02	IC M5218P
J301	*1-560-280-00	CONNECTOR PIN 3P (SYNC)
J302	*1-560-039-00	PIN, CONNECTOR (CONTROL S IN)
J303	*1-560-039-00	PIN, CONNECTOR (CONTROL S OUT)
L101	1-410-033-11	MICRO INDUCTOR 100UH
L201	1-410-033-11	MICRO INDUCTOR 100UH
L301	1-422-162-11	COIL
M301	A-4608-291-A	MOTOR ASSY
PH101	8-719-411-28	DIODE ON1128
PL301	1-518-169-XX	LAMP, PILOT
PS101	1-532-605-00	LINK, IC
PS102	1-532-605-00	LINK, IC
Q101	8-729-400-81	TRANSISTOR 2SD1266-Q
Q102	8-729-606-33	TRANSISTOR 2SC2603-F
Q103	8-729-400-10	TRANSISTOR 2SB941-R
Q104	8-729-117-54	TRANSISTOR 2SA1175
Q105	8-729-606-33	TRANSISTOR 2SC2603-F
Q106	8-729-400-81	TRANSISTOR 2SD1266-Q
Q107	8-729-802-34	TRANSISTOR 2SD1388
Q108	8-729-802-34	TRANSISTOR 2SD1388
Q109	8-729-802-34	TRANSISTOR 2SD1388
Q110	8-729-802-34	TRANSISTOR 2SD1388
Q111	8-729-802-22	TRANSISTOR 2SB1014
Q112	8-729-802-22	TRANSISTOR 2SB1014
Q113	8-729-802-22	TRANSISTOR 2SB1014
Q114	8-729-802-22	TRANSISTOR 2SB1014
Q115	8-729-606-33	TRANSISTOR 2SC2603-F
Q116	8-729-606-33	TRANSISTOR 2SC2603-F
Q117	8-729-606-33	TRANSISTOR 2SC2603-F
Q118	8-729-606-33	TRANSISTOR 2SC2603-F
Q119	8-729-606-33	TRANSISTOR 2SC2603-F
Q201	8-729-606-33	TRANSISTOR 2SC2603-F
Q202	8-729-900-85	TRANSISTOR DTC144WS
Q203	8-729-117-54	TRANSISTOR 2SA1175
Q204	8-729-117-54	TRANSISTOR 2SA1175
Q205	8-729-606-33	TRANSISTOR 2SC2603-F
Q206	8-729-606-33	TRANSISTOR 2SC2603-F
Q207	8-729-117-54	TRANSISTOR 2SA1175
Q208	8-729-900-61	TRANSISTOR DTA114ES
Q209	8-729-606-33	TRANSISTOR 2SC2603-F
Q210	8-729-606-33	TRANSISTOR 2SC2603-F
Q211	8-729-802-34	TRANSISTOR 2SD1388

## ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q212	8-729-802-22	TRANSISTOR 2SB1014
Q213	8-729-900-64	TRANSISTOR DTA124ES
Q214	8-729-802-34	TRANSISTOR 2SD1388
Q301	8-729-101-01	TRANSISTOR PH101
Q302	8-729-101-01	TRANSISTOR PH101
R101	1-247-836-00	CARBON 1.6K 5% 1/6W
R102	1-247-837-00	CARBON 1.8K 5% 1/6W
R103	1-247-811-00	CARBON 150 5% 1/6W
R104	1-247-811-00	CARBON 150 5% 1/6W
R105	1-247-783-00	CARBON 10 5% 1/6W
R106	1-217-395-00	FUSIBLE 47 5% 1/4W F
R107	1-247-879-00	CARBON 100K 5% 1/6W
R108	1-247-807-00	CARBON 100 5% 1/6W
R109	1-247-893-00	CARBON 390K 5% 1/6W
R110	1-247-893-00	CARBON 390K 5% 1/6W
R111	1-249-437-11	CARBON 47K 5% 1/6W
R112	1-249-433-11	CARBON 22K 5% 1/6W
R113	1-247-807-00	CARBON 100 5% 1/6W
R114	1-247-807-00	CARBON 100 5% 1/6W
R115	1-247-845-00	CARBON 3.9K 5% 1/6W
R116	1-247-825-00	CARBON 560 5% 1/6W
R117	1-247-887-00	CARBON 220K 5% 1/6W
R118	1-247-825-00	CARBON 560 5% 1/6W
R119	1-249-419-11	CARBON 1.5K 5% 1/6W
R120	1-247-845-00	CARBON 3.9K 5% 1/6W
R121	1-247-807-00	CARBON 100 5% 1/6W
R122	1-247-831-00	CARBON 1K 5% 1/6W
R123	1-247-815-00	CARBON 220 5% 1/6W
R124	1-247-815-00	CARBON 220 5% 1/6W
R125	1-247-815-00	CARBON 220 5% 1/6W
R126	1-247-815-00	CARBON 220 5% 1/6W
R127	1-247-815-00	CARBON 220 5% 1/6W
R128	1-247-815-00	CARBON 220 5% 1/6W
R129	1-247-815-00	CARBON 220 5% 1/6W
R130	1-247-815-00	CARBON 220 5% 1/6W
R131	1-247-831-00	CARBON 1K 5% 1/6W
R132	1-247-831-00	CARBON 1K 5% 1/6W
R133	1-247-831-00	CARBON 1K 5% 1/6W
R134	1-247-815-00	CARBON 220 5% 1/6W
R135	1-247-823-00	CARBON 470 5% 1/6W
R136	1-247-823-00	CARBON 470 5% 1/6W
R140	1-247-823-00	CARBON 470 5% 1/6W
R201	1-249-433-11	CARBON 22K 5% 1/6W
R202	1-249-433-11	CARBON 22K 5% 1/6W
R203	1-249-429-11	CARBON 10K 5% 1/6W
R204	1-249-421-11	CARBON 2.2K 5% 1/6W
R205	1-247-903-00	CARBON 1M 5% 1/6W
R206	1-247-849-00	CARBON 5.6K 5% 1/6W
R207	1-247-825-00	CARBON 560 5% 1/6W
R208	1-247-815-00	CARBON 220 5% 1/6W
R209	1-247-825-00	CARBON 560 5% 1/6W
R210	1-247-815-00	CARBON 220 5% 1/6W
R211	1-249-433-11	CARBON 22K 5% 1/6W
R212	1-249-433-11	CARBON 22K 5% 1/6W
R213	1-249-429-11	CARBON 10K 5% 1/6W
R214	1-249-433-11	CARBON 22K 5% 1/6W
R215	1-249-429-11	CARBON 10K 5% 1/6W

**ELECTRICAL PARTS**

Ref.No.	Part No.	Description			
R216	1-249-433-11	CARBON	22K	5%	1/6W
R217	1-249-433-11	CARBON	22K	5%	1/6W
R218	1-247-849-00	CARBON	5.6K	5%	1/6W
R219	1-247-851-00	CARBON	6.8K	5%	1/6W
R220	1-249-433-11	CARBON	22K	5%	1/6W
R221	1-247-849-00	CARBON	5.6K	5%	1/6W
R222	1-247-807-00	CARBON	100	5%	1/6W
R223	1-249-429-11	CARBON	10K	5%	1/6W
R224	1-249-429-11	CARBON	10K	5%	1/6W
R225	1-247-807-00	CARBON	100	5%	1/6W
R226	1-247-857-00	CARBON	12K	5%	1/6W
R227	1-249-432-11	CARBON	18K	5%	1/6W
R228	1-247-783-00	CARBON	10	5%	1/6W
R229	1-249-433-11	CARBON	22K	5%	1/6W
R230	1-249-425-11	CARBON	4.7K	5%	1/6W
R231	1-249-425-11	CARBON	4.7K	5%	1/6W
R232	1-249-437-11	CARBON	47K	5%	1/6W
R233	1-247-887-00	CARBON	220K	5%	1/6W
R234	1-247-879-00	CARBON	100K	5%	1/6W
R235	1-249-429-11	CARBON	10K	5%	1/6W
R236	1-249-425-11	CARBON	4.7K	5%	1/6W
R237	1-247-867-00	CARBON	33K	5%	1/6W
R238	1-247-867-00	CARBON	33K	5%	1/6W
R239	1-247-887-00	CARBON	220K	5%	1/6W
R240	1-249-429-11	CARBON	10K	5%	1/6W
R241	1-249-429-11	CARBON	10K	5%	1/6W
R242	1-247-815-00	CARBON	220	5%	1/6W
R243	1-247-887-00	CARBON	220K	5%	1/6W
R244	1-247-887-00	CARBON	220K	5%	1/6W
R245	1-249-425-11	CARBON	4.7K	5%	1/6W
R246	1-247-867-00	CARBON	33K	5%	1/6W
R247	1-247-903-00	CARBON	1M	5%	1/6W
R248	1-247-883-00	CARBON	150K	5%	1/6W
R249	1-247-875-00	CARBON	68K	5%	1/6W
R250	1-249-429-11	CARBON	10K	5%	1/6W
R251	1-247-903-00	CARBON	1M	5%	1/6W
R252	1-247-815-00	CARBON	220	5%	1/6W
R253	1-247-879-00	CARBON	100K	5%	1/6W
R254	1-247-773-00	CARBON	3.9	5%	1/6W
R302	1-247-825-00	CARBON	560	5%	1/6W
RY201	1-515-519-00	RELAY			
S301	1-570-282-11	SWITCH, KEY BOARD (START/STOP)			
S302	1-570-282-11	SWITCH, KEY BOARD (ARM TRANSPORT BACK)			
S303	1-570-282-11	SWITCH, KEY BOARD (ARM TRANSPORT FWD)			

**ELECTRICAL PARTS**

Ref.No.	Part No.	Description
S304	1-570-282-11	SWITCH, KEY BOARD (ARM LIFTER)
S305	1-570-282-11	SWITCH, KEY BOARD (REPEAT)
S306	1-570-282-11	SWITCH, KEY BOARD (SPEED 33/45)
S307	1-570-043-11	SWITCH, PUSH (1 KEY)(POWER)
S308	1-554-817-11	SWITCH
S901	△.1-570-047-11	(E)...SWITCH, VOLTAGE CHANGE
T301	△.1-447-516-51	(AEP,UK)...TRANSFORMER, POWER
T301	△.1-447-517-71	(E).....TRANSFORMER, POWER
X101	1-527-380-21	CRYSTAL, OSC
X201	1-567-192-11	OSCILLATOR, CERAMIC

**ACCESSORY & PACKING MATERIAL**

Part No.	Description
1-557-109-21	CORD, CONNECTION
1-558-233-11	CORD (WITH CONNECTOR)
△.1-526-565-12	(E).....AC PLUG ADAPTOR
3-532-616-00	BAG, POLYETHYLENE
3-701-630-00	BAG, POLYETHYLENE
3-701-634-00	BAG, POLYETHYLENE
3-760-844-11	(AEP,UK,E)...MANUAL, INSTRUCTION
3-760-844-41	(AEP).....MANUAL, INSTRUCTION
4-883-723-01	SHEET, TURNTABLE
4-885-168-00	ADAPTOR, 45
4-885-784-00	HOLDER, TURNTABLE
*4-885-792-00	PLUG IN SEAL (A)
4-912-010-01	SCREW, TRANSPORT
4-912-183-01	PILLOW, ARM
4-912-184-01	CUSHION (LEFT)
4-912-185-01	CUSHION (RIGHT)
4-912-195-01	PROTECTOR
4-913-315-01	(AEP,UK)...INDIVIDUAL CARTON
4-913-315-11	(E).....INDIVIDUAL CARTON
4-913-320-01	(AEP)...LABEL, MODEL NUMBER
4-913-322-01	(UK)....LABEL, MODEL NUMBER
4-913-323-01	(E).....LABEL, MODEL NUMBER
4-913-324-01	(E).....LABEL, VOLTAGE

The components identified by shading and mark △ are critical for safety. Replace only with part number specified.